Statistical Bulletin

METROPOLITAN LIFE INSURANCE COMPANY

Volume 38 November 1957

Increased Chances of a Golden Wedding

THE continuing decline in mortality since the turn of the century has increased markedly the chances that a bride and groom will celebrate a 50th wedding anniversary. For the typical young couple now entering marriage, the likelihood that both will survive to the golden anniversary is more than twice what it was for the average couple of a half century ago. Thus, for the man aged 21 who marries a girl four years younger than himself, the chances are 419 in 1,000—more than 2 out of 5—that both will survive through the next 50 years, according to mortality conditions for the white population of the United States in 1955; the corresponding chances were only 192 in 1,000, according to the mortality prevailing in 1900-02. For the groom of 25 with a bride of 21 the chances of joint survival for a half century are 296 per 1,000, compared with 123 in the earlier period.

The probabilities of joint survival for 10, 25, or 50 years for couples of various ages are shown in the table on page 2. As the figures indicate, the prospects of a golden wedding are bright for young couples, but decrease rapidly with advance in age at marriage. For example, when the groom and bride are both 17 years of age, the chances are 1 in 2; when both are 25 at marriage, the chances drop to 1 in 4, and decrease further to about 1 in 10 at age 31. In cases of relatively late marriage—at ages 39 or later—the chances of joint survival for 50 years are less than 1 in 100.

The outlook for celebrating a silver anniversary has also increased greatly during recent decades. A very high proportion of young brides and grooms can look forward to that happy event. The chances are now 9 in 10 for grooms up to age 23 who take a bride four years younger, and also for grooms up to age 21 if their bride is of the same age or as much as two years older. Even for men who marry as late as age 35, the chances of a 25th wedding anniversary are better than 7 in 10. As is evident from the table, this is more favorable than the comparable chances for teen-

agers who married around 1900.

The typical American bridal couple today is almost certain to survive to its 10th wedding anniversary. For example, the chances are about 98 in 100 for men and women who marry in their early twenties, or one eighth greater than they were a half century ago. Even for brides and grooms in their late 30's, the chances of celebrating a 10th anniversary are greater than 90 in 100.

Our country has reaped many

●

CHANCES IN 1,000 OF JOINT SURVIVAL FOR 10, 25, OR 50 YEARS

White Males and White Females, United States, 1955 and 1900-02

Age of Male	Years of Joint Survival								
	10	25	50	10	25	50	10	25	50
	Female Four Years Younger			Female Same Age as Male			Female Two Years Older		
	1955								
17	978	932	539	977	927	501	977	923	476
19	977	924	480	977	918	438	976	913	413
21	977	914	419	976	906	375	976	901	350
23	977	902	357	976	892	314	975	886	289
25	976	886	296	975	875	254	973	867	228
27	974	867	237	972	853	195	971	845	170
29	971	843	181	968	827	142	966	817	120
31	967	815	131	963	797	97	960	785	79
33	961	783	88	956	762	61	953	749	47
35	953	746	55	947	723	34	944	707	25
37	943	704	32	937	678	18	933	660	12
39	932	658	17	924	627	9	919	607	6
	1900-02								
17	899	699	267	887	683	235	882	675	216
19	887	681	229	877	666	197	873	659	179
21	878	664	192	869	650	161	865	643	144
23	870	648	157	862	634	127	859	627	111
25	862	631	123	856	617	96	853	609	82
27	855	614	92	849	598	68	846	588	56
29	847	594	65	842	576	45	839	564	36
31	840	571	42	835	550	28	832	536	21
33	833	545	26	828	520	15	824	504	11
35	825	515	14	820	487	8	816	470	5
37	817	482	7	810	451	3	805	432	2
39	807	445	3	798	411	1	792	390	1

social and economic benefits from the marked improvement in survival at the younger and middle ages. Prominent among these has been an increase in the stability of family life by postponing widowhood to the older ages and by markedly reducing the burden of orphanhood. Although the risk of family disruption by premature death has been greatly lessened, it is still a contingency which every family must face. In order to mitigate the economic losses entailed by death, more than 115,000,000 people in the United States and Canada own Life insurance in legal reserve companies.

Continued Progress Against Tuberculosis

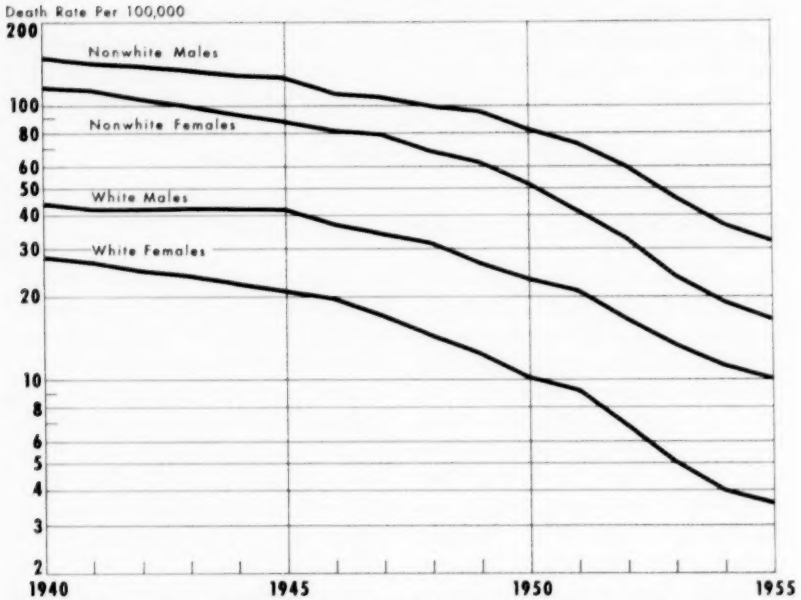
THE mortality from tuberculosis in the United States, which has been decreasing for many decades, accelerated its rate of decline in recent years. Between 1949 and 1956 the age-adjusted death rate from the disease fell no less than 70 percent—from 25.5 to 7.6 per 100,000 population—compared with a reduction of 35 percent in the preceding seven-year period. Figures available thus far in 1957 indicate that a new low may be established this year.

As the chart on page 4 shows, both white persons and nonwhites have shared in the accelerated downward trend in mortality from the disease. The recent gains have been particularly marked among white females. Their age-adjusted death rate from tuberculosis was down to 3.6 per 100,000 in 1955, a decrease of more than 70 percent since 1949. For white males the corresponding reduction was about 60 percent. In the nonwhite population, too, females have made more rapid progress than males in the control of tuberculosis. Hence, the mortality from the disease is being increasingly concentrated among males. In 1955 the death rate for males was about twice that for females among nonwhites and not far from three times that for females among white persons. It is also apparent from the chart that the rate continues to be much higher in the nonwhite than in the white population.

An accelerated reduction in tuberculosis mortality is manifest at every age period. Between 1949 and 1955 the decrease was nearly 90 percent for the total population at ages 5-24 years, and exceeded 70 percent at the other age groups under 45. But in the prior six-year period, from 1942 to 1948, the maximum reduction—which occurred at ages 5-24 years—was little more than 50 percent.

The major factor in the reduction of tuberculosis mortality has been the decrease in number of active cases of the disease. Also of significance has been the diminishing proportion of young people with primary tuberculous infec-

AGE-ADJUSTED DEATH RATES* FROM TUBERCULOSIS
By Color and Sex. United States, 1940-1955
(Semilogarithmic Scale)



*Death rates adjusted for age on basis of United States population on April 1, 1940.

●

tion, demonstrated by numerous studies of tuberculin tests of school-age children. The great majority of people in our country now reaching age 20 react negatively to the test.

The improvement in tuberculosis mortality reflects also intensified efforts to detect the disease and newer methods of treating it. Case-finding programs have been greatly expanded, and in 1955 more than 10 percent of the population in our country received chest X rays. Furthermore, the development of various drugs and of new surgical procedures in the treatment of the disease has improved the outlook for patients. Drug therapy has been widely adopted and probably most tuberculous patients currently are treated with one or more of these drugs.

It would be a serious mistake to underestimate the magnitude of the tuberculosis problem which still exists. The number of persons in the United States with active

tuberculosis is estimated to be 250,000, or 150 per 100,000 population. Of this total, only about 60 percent are known to public health authorities, which means that there are still about 100,000 unidentified persons with active disease; the latter group constitutes a major reservoir of infection. The potential danger of spreading tuberculosis has been increased by the large number of patients who are being treated at home—a development made possible by changes in the medical care of the disease. However, even now more than half the known patients with active disease receive extended periods of hospital care. In addition to active cases, there are approximately 550,000 people who have inactive tuberculosis, and 1,200,000 more who have had the disease but who do not require public health supervision. Altogether, the total of persons with a past or present history of active tuberculosis is approximately 2,000,000. Moreover, migration from areas outside continental United States and contacts with countries where tuberculosis is still rampant provide continuing reservoirs of infection.

The campaign against tuberculosis needs to be carried on intensively until the disease is completely stamped out. As the Public Health Service points out, major emphasis in case finding should be placed on those groups of the population where the tuberculosis problem is now largely concentrated: low income groups, migrant workers, people in institutions, and those known to be exposed to the disease. At the same time, the methods used to control the disease need to be modified in the light of the fact that an increasing proportion of active cases are found among people past midlife. Some promising results in preventing the disease have come from the use of antituberculosis drugs, but further research is nevertheless required in this field. The search for still better drugs and better programs of treatment is continuing.

Death Toll From Fires and Explosions

FIRES and explosions are responsible for the loss of more than 6,000 lives a year in the United States, equivalent to a death rate of 3.9 per 100,000 population.* Only motor vehicle injuries and falls take a larger toll of accidental death. The mortality from fires and explosions begins its seasonal rise with the onset of colder weather and the increased use of heating equipment. The peak mortality is usually reached in December, when the toll is more than three times

*These figures include, in addition to deaths caused by accidental fire or explosion in buildings or other property damaged or destroyed, deaths resulting from the setting afire of wearing apparel, bedclothes, and upholstered chairs where no conflagration ensues. Not included in these figures are about 750 deaths a year from burns and scalds resulting from contact with hot objects, corrosive liquids, and steam.

TABLE 1—MORTALITY FROM FIRE AND EXPLOSION

By Sex and Age. United States, 1954-55

Age Period (Years)	Average of Annual Death Rates per 100,000		
	Total	Males	Females
All Ages	3.9	4.3	3.4
Under 1	7.2	7.3	7.1
1–4	6.7	5.9	7.4
5–9	2.8	2.2	3.5
10–14	1.3	1.4	1.4
15–19	1.2	1.3	1.1
20–24	1.6	1.9	1.4
25–34	2.1	2.8	1.4
35–44	2.6	3.5	1.8
45–54	3.8	5.0	2.7
55–64	4.4	5.5	3.4
65–74	8.4	10.2	6.9
75–84	16.9	19.4	14.9
85 and over	27.9	32.6	25.0

Source of basic data: Reports of National Office of Vital Statistics.

●

that in July or August.

More than four fifths of the people who die as a result of fires and explosions sustain their injuries in and about the home. Factories, workshops, mines and quarries, and other industrial places account for only about 5 percent of the deaths. An even smaller proportion is attributable to conflagrations in public buildings, such as hospitals, schools, stores, and places of amusement. The remainder of the victims meet their death in various other places, including farms and resident institutions.

The mortality from fires and explosions is highest among the young and the old, as may be seen in the table on this page. Among infants and pre-school children the death rate was about 7 per 100,000 in 1954-55, higher than for any other age group under 65 years. The rate falls to a minimum in adolescence and then rises progressively with advance in age, slowly at first and much more rapidly past age 65. At ages 75-84 the death rate is more than twice that under age 5; at ages 85 and over the ratio is about 4 to 1. Older people, because of their infirmities, may often find it difficult to escape from a burning building. In addition, their decreased agility makes them particularly vulnerable to the hazard of having their clothing ignited by an open fire or other flame. Many youngsters are killed in fires when

left at home without a competent baby sitter or other caretaker.

As may be seen in the table, fires take a somewhat higher mortality among males than among females. In 1954-55 the death rates for all ages combined were 4.3 and 3.4 per 100,000 for males and females, respectively. Males experienced the higher death rate at all but the childhood ages.

Information on the major causes of fires in buildings in the United States is available from the reports of the National Fire Protection Association. As the table below indicates, dangerous smoking habits and the careless use of matches account for about one fifth of the 800,000 fires each year which damage or destroy buildings. Conflagrations of this type result mainly from persons smoking in bed or while drowsing in an upholstered chair, emptying pipe ashes or throwing smoldering cigarettes or burning matches into wastebaskets, and children playing with matches.

One eighth of the building fires are associated with the misuse of and defects in electrical appliances and equipment or with faulty wiring. A like proportion of the fires are reported to result from defective or overheated heating and cooking equipment. Other major causes of building fires include the ignition of rubbish, lightning, the misuse of flammable liquids, and defective or overheated chimneys.

●

TABLE 2—ESTIMATED NUMBER OF FIRES IN BUILDINGS, BY CAUSE
United States, 1954-56

Cause	Average Annual Number of Fires	Percent Distribution
All Causes	803,600	100.0
Smoking and matches	153,900	19.2
Electrical—fires due to misuse, faulty wiring, equipment, appliances	100,100	12.4
Defective or overheated heating and cooking equipment	100,000	12.4
Rubbish, ignition unknown	57,700	7.2
Lightning	44,400	5.5
Flammable liquids	40,800	5.1
Chimneys, flues—defective or overheated	35,400	4.4
Spontaneous ignition	27,000	3.4
Open lights, flames, sparks	21,800	2.7
Hot ashes, coals	16,000	2.0
All other specified	135,100	16.8
Unknown	71,400	8.9

Source of basic data: National Fire Protection Association.

These facts make it apparent that a large proportion of fires are preventable. The needless loss of life and property can be reduced through intensified efforts by the many groups that have already made valuable contributions to fire prevention. These include, in addition to local fire departments and insurance companies, such national organizations as the National Fire Protection Association, the National Board of Fire Underwriters, the International Council of Fire Chiefs, and the National Safety Council.

Aspects of the Suicide Problem

THE suicide rate in the United States has been exceptionally low in recent years. In 1952-55 the rate averaged 10.1 per 100,000, or about 10 percent below the level for 1946-51, the years immediately following World War II. Moreover, provisional figures for 1956 indicate that the frequency of suicide has fallen below 10.0 per 100,000 for the first time on record.

The reduction in suicide has extended to the entire range of ages in both sexes; this is evident from Table 1, where figures for 1953-55 are compared with those 15 years earlier. Among white males the reduction was about one third in the broad age range 25-64 years, and was at least 20 percent in practically every other age group. Among white females the downward trend

TABLE 1—SUICIDE RATES AMONG WHITE PERSONS BY SEX AND AGE
United States, 1953-55 and 1938-40

Age Period (Years)	Average of Annual Death Rates per 100,000				Percent Decline 1953-55 Since 1938-40	
	White Males		White Females			
	1953-55	1938-40	1953-55	1938-40	White Males	White Females
All Ages	17.3	24.1	4.7	7.3	28.2	35.6
15–19	3.9	4.9	1.4	3.2	20.4	56.3
20–24	9.5	13.4	2.6	5.5	29.1	52.7
25–34	13.1	20.6	4.7	8.2	36.4	42.7
35–44	20.0	30.8	6.6	11.4	35.1	42.1
45–54	31.9	46.3	9.1	14.2	31.1	35.9
55–64	41.2	60.2	9.7	13.6	31.6	28.7
65–74	47.4	60.1	9.0	12.2	21.2	26.2
75 and over	55.9	65.8	7.4	8.1	15.0	8.6

Source of basic data: Reports of the National Office of Vital Statistics.

TABLE 2—SUICIDE BY MEANS OF INJURY
White Persons, by Sex. United States, 1953-55

Means of Injury	Average Annual Number		Percent Distribution	
	White Males	White Females	White Males	White Females
Total	12,278	3,406	100.0	100.0
Poisoning	2,166	1,158	17.7	34.1
Barbiturates and other soporifics	339	486	2.8	14.3
Other solids and liquids	391	336	3.2	9.9
Gases in domestic use	207	140	1.7	4.1
Motor-vehicle exhaust and other gases (except domestic)	1,229	196	10.0	5.8
Hanging and strangulation	2,508	822	20.4	24.1
Drowning	333	257	2.7	7.5
Firearms and explosives	6,393	808	52.1	23.7
Cutting and piercing instruments	373	97	3.0	2.8
Jumping from high place	319	161	2.6	4.7
Other means	186	103	1.5	3.1

Source of basic data: Reports of the National Office of Vital Statistics.

in suicide was even more rapid. Under age 25 their rate in 1953-55 was less than half that in 1938-40; at ages 25-44 the reduction exceeded 40 percent, and even at ages 65-74 it was more than 25 percent. As a result of the more favorable trend among females, the sex ratio of the suicide rate increased at almost every age group.

The sexes differ in the relative frequency with which they use various means to commit suicide. As may be seen in Table 2, more than half of the white males who die by their own hand choose firearms as the means. Hanging and strangulation account for an additional one fifth, and poisoning for almost as large a proportion. All the other means—including drowning, the use of cutting and piercing instruments, jumping from high places—were together responsible for no more than one tenth of the suicides among the males.

Among females, however, poisoning is the most common means of suicide, being used in one out of every three cases. The barbiturates and other soporific substances outranked the other poisons, accounting for nearly 15 percent of all suicides among females, compared with less than 3 percent of the total among males. Hanging and firearms, next in order, each were chosen in nearly one quarter of the cases.

The relative frequency of suicide varies markedly with marital status, being lowest for the mar-

ried, somewhat higher for the single, and highest for the widowed and the divorced. In 1949-51, the latest data available on this point, the age-adjusted suicide rate among white males, aged 20-74 years, ranged from slightly over 20 per 100,000 for the married to 80 per 100,000 among the divorced. The rate for single men was a little more than twice that for the married; the widowed had a suicide rate more than 3½ times and the divorced nearly four times that for the married. Among white females the disparity in the frequency of suicide between the married and the unmarried was less pronounced, the rates ranging from 6.6 per 100,000 for the married to 19.2 for the divorced.

In general, the suicide rate in our country is lowest in the South and highest in the West. In 1955 the rate varied from 7.9 per 100,000 in the East South Central region to 12.3 in the Mountain States and 14.9 in the Pacific region. The variation is wider when individual States are considered, the suicide rate in 1955 ranging from 6.0 per 100,000 in Mississippi to 26.8 in Nevada. To a large extent, the low frequency of suicide in the South reflects the high proportion of nonwhites in the population there. The suicide rate for nonwhite persons in the country as a whole is only about one third that for the white population.

Suicide, despite its reduced frequency in recent years, continues to be a major cause of death. In 1956 somewhat over 16,000 people in the United States were reported to have died by their own hand. The studies being made by psychiatrists and investigators in the behavioral sciences may help to reduce this needless loss of life.

AVAILABLE FOR DISTRIBUTION

The following studies have been published recently, and reprints of them will be sent upon request.

1. "The Mortality Experience of Industrial Policyholders, 1950 to 1955." *Transactions of the Society of Actuaries*, May 1957.
2. "Some Implications of Mortality Statistics Relating to Coronary Artery Disease." *Journal of Chronic Diseases*, September 1957.
3. "Relationship of Body Weight to Mortality and Morbidity." *Metabolism*, September 1957.

●

A very limited supply of the monograph "A 40-Year Campaign Against Tuberculosis," published in 1952, is available for distribution to individuals and organizations especially interested in tuberculosis control.

MORTALITY FROM SELECTED CAUSES

Industrial Policyholders, Metropolitan Life Insurance Company

October 1957

Cause of Death	Annual Rate per 100,000 Policyholders*				
	October		Year to Date		
	1957†	1956	1957†	1956	1955
All Causes	642.2	606.2	645.7	621.9	628.6
Tuberculosis (all forms)	6.9	6.4	6.8	7.3	8.1
Communicable diseases of childhood	.1	.1	.2	.3	.3
Acute poliomyelitis	.2	.9	.1	.4	.6
Malignant neoplasms	134.8	133.0	136.3	129.5	129.8
Digestive system	44.6	45.2	47.4	44.4	45.7
Respiratory system	16.7	18.0	18.8	17.4	16.6
Diabetes mellitus	16.4	15.0	15.0	15.2	15.0
Diseases of the cardiovascular-renal system	330.5	313.6	342.6	332.2	331.7
Vascular lesions, central nervous system	63.5	58.9	65.7	64.4	65.0
Diseases of heart	241.0	229.4	251.5	243.1	241.7
Chronic rheumatic heart disease	11.4	12.2	11.2	11.6	12.3
Arteriosclerotic and degenerative heart disease	191.6	177.8	196.8	189.1	186.5
Diseases of coronary arteries	109.1	105.7	112.0	108.8	108.1
Hypertension with heart disease	28.9	31.4	33.3	33.8	34.6
Other diseases of heart	9.2	8.0	10.1	8.5	8.3
Nephritis and nephrosis	8.9	6.7	8.0	7.7	8.6
Pneumonia and influenza	23.7	10.9	15.9	13.8	14.3
Complications of pregnancy, childbirth	.4	1.0	.8	.9	1.0
Suicide	6.5	6.1	5.8	5.7	6.1
Homicide	3.1	3.2	2.9	2.4	2.1
Accidents—total	35.1	35.6	35.2	35.7	36.9
Motor vehicle	16.3	16.7	15.1	15.5	15.0
All other causes	84.5	80.4	84.1	78.5	82.7

*The death rates prior to March 1956 relate to persons insured under industrial premium-paying policies and persons with Ordinary Monthly Premium Policies for Less Than $1,000; beginning with March 1956, included also are persons with Debit Book Ordinary policies for $2,000 or less.

†The death rates for 1957 are provisional.

•

Correspondence relating to the BULLETIN may be addressed to:
The Editor
STATISTICAL BULLETIN
Metropolitan Life Insurance Company
1 Madison Avenue, New York 10, N. Y.

MORTALITY FROM ALL CAUSES

INDUSTRIAL POLICYHOLDERS · METROPOLITAN LIFE INSURANCE COMPANY

(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	7.0	6.5	6.8	6.8	6.4	6.2	5.9	5.9	5.7	6.1	6.0	5.9
1957	6.8	6.7	7.2	6.5	6.3	6.3	6.3	6.1	6.0	6.4		

P.F.M.—Printed in U.S.A.—47603—(11-57)

S22

Mr. Eugene B. Power
University Microfilms
313 N. First Street
Ann Arbor, Michigan

STATISTICAL BULLETIN
1 Madison Avenue, New York 10, N. Y.
Return Postage Guaranteed

Bulk Rate
U. S. POSTAGE
Paid
Long Island City, N. Y.
Permit No. 7